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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,182	07/24/2003	Zachary Merlynn Loafman	AUS920030464US1	1555

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EXAMINER

PATEL, KAUSHIKKUMAR M

ART UNIT	PAPER NUMBER
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2188

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/626,182	<b>Applicant(s)</b> LOAFMAN, ZACHARY MERLYNN	
	<b>Examiner</b> Kaushikkumar Patel	<b>Art Unit</b> 2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1, 3-8, 10-15 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,8,10,15 and 17 is/are rejected.
- 7) ☒ Claim(s) 4-7,11-14 and 18-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This office action is in response to applicant's communication filed May 5, 2006 in response to PTO office action mailed January 3, 2006. The applicant's remarks and amendments to the claims and/or specification were considered with the results that follow.
2. In response to the last office action, claims 1, 3-5, 8, 10-12, 15 and 17-19 have been amended. Claim 21 has been added. Claims 2, 9 and 16 have been canceled. As a result, claims 1, 2-8, 10-15 and 17-21 remain pending in this application.
3. The rejection of claims under 35 U.S.C. 112, second paragraph has been withdrawn due to amendment filed May 05, 2006.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1, 8 and 16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
6. Claims 1, 3-8, 10-15, 17-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1, 8 and 15, the limitation "determining, using the range of data, how much data to read" is unclear in lines 12, 13-14 and 11 respectively. The range of data provides the amount of data needed, and further determination of how much data to be read is unclear.

Claims 3-7, 10-14, and 17-21 are also rejected due to their dependency on rejected claims.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1,3, 8,10 and 15,17 are rejected under 35 U.S.C. 103(a) as being unpatentable over P.J. Fleming and J.J. Parker (IBM technical disclosure bulletin, vol. 33 issue 9, February 1991) (Fleming herein after) further in view of Jun Hasegawa et al. (Japan patent no. JP 61136145 A) (Jun herein after) and Document NA910962 (Variable length User Specified Page Fault, IBM Tech. Disclosure Bulletin, September 1991) (Doc. 2 herein after) and Applicant's admitted prior art included as an evidentiary reference.

As per claim 1, Fleming teaches method of improving prefetching (page 327, paragraph 1)

Determining whether data from a file is being read randomly or sequentially upon receiving a request to read data from the file (Fleming teaches, FAH value indicates if the file was accessed sequentially or randomly, see page 327, paragraph 3, also as per present application specification well known in the art, see specification page 10, lines 17-21, specifically mentioned as "a determination (as is presently done) is made"), the request including a range of data to be read (inherent to read command, see present application specification page 8, lines 14-21, taught as executing program desires to read data, it provides the virtual address and the range of the data), the range of data spanning more than one page (as explained above, the range includes all the data executing program desires that can include one or more pages, also Fleming teaches file access history (FAH), which keeps track of amount of data that was accessed and consistency of requested data (page 327, paragraph 3) and provides this information to caching or read-ahead programs the amount of data that should be cached (page 328, paragraph 1);

Determining, if data is being read randomly from the file (well known as explained above from present application specification page 10, lines 14-21)

reading the range of the data from the storage at once (taught as File Access History (FAH) value informs the read-ahead program the amount of the data that should be cached (some, most, all) page 328, paragraphs 1 and 2). Fleming fails to teach determining whether previous data was read from the memory (cache) or from the storage and depending upon the result of the determination next data is accessed from the cache or from the storage device.

Jun teaches a method to read data from a file (see effect of the invention on page 5), determining, whether previous data has been read from a memory (cache) or from the storage device and attempting to read the data from the memory if previous data has been read from the memory or from the storage device if previous data has been read from the storage device (taught as when hit was found in the cache during immediately previous instruction retrieving it is highly likely that a hit is found in the cache and when no hit was found (i.e. data was read from storage), it is highly unlikely that hit is found and direct read from main memory should be stated) (page 3, lines 1-7).

It would have been obvious to one having ordinary skilled in the art at the time of the invention would have modified the teachings of the Fleming to improve the prefetching by accessing the data from the cache if previous data was read from the cache or from the storage if previous data was accessed from the storage as taught above to decrease the overhead in the event of a mishit (page 3, paragraph 2, lines 1-2).

Fleming and Jun fails to teach single page fault. Doc. 2 teaches loading variable length range of pages in main memory using single page fault (see disclosure text). It would have been obvious to one having ordinary skill in the art at the time of the invention to use loading of multiple pages in main memory using single page fault as taught by Doc. 2 in the system of Fleming and Jun to reduce page faults and thus reduce latency of retrieving data from storage using multiple page faults.

As per claim 3, Fleming teaches that FAH value can be obtained when the file is first opened (page 327, paragraph 5).

Claims 8, 10, 15 and 17 are rejected under the same rationale as applied to claims 1 and 3 above.

***Allowable Subject Matter***

9. Claims 4-7, 11-14 and 18-21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. Claims 4-7, 11-14 and 18-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Prior art on record fails to teach increasing or decreasing the trust value by fixed award value or penalty value respectively in case of hit or miss. Also increasing the trust value when data was accessed from storage device and penalty value is larger than award value.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaushikkumar Patel whose telephone number is 571-272-5536. The examiner can normally be reached on 8.00 am - 4.30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2188

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
kmp

Kaushikkumar Patel  
Examiner  
Art Unit 2188

  
7/18/06

**MANO PADMANABHAN**  
**SUPERVISORY PATENT EXAMINER**